

Amendments to the Claims

The following listing of claims replaces all prior versions of the claims and all prior listings of the claims in the present application.

Claims 1-29 (canceled)

Claim 30 (new): A tyre for a vehicle wheel, comprising:

a carcass structure;

a belt structure applied to the carcass structure at a circumferentially-outer position of the carcass structure;

a tread band circumferentially superposed on the belt structure; and

sidewalls laterally applied to opposite sides of the carcass structure;

wherein the carcass structure comprises:

at least one first carcass ply;

at least one second carcass ply; and

a pair of annular reinforcing structures engaged close to respective inner-

circumferential edges of the carcass plies;

wherein the at least one first carcass ply and the at least one second carcass ply are formed of strip sections extending in a substantially U-shaped conformation,

wherein the strip sections comprise at least two thread elements longitudinally arranged parallel to each other,

wherein the at least two thread elements are at least partly coated with at least one layer of elastomer material,

wherein the at least one first carcass ply comprises a first series and a second series of strip sections arranged in mutually-alternating sequence along a circumferential extension of the carcass structure,

wherein the at least one second carcass ply comprises a third series and a fourth series of strip sections arranged in mutually-alternating sequence along the circumferential extension of the carcass structure,

wherein each of the annular reinforcing structures comprises:

a first primary portion; and

a second primary portion;

wherein the first primary portion comprises an axially-inner side turned towards end flaps of the strip sections of the first series and an axially-outer side turned towards end flaps of the strip sections of the second series, and

wherein the second primary portion comprises an axially-inner side turned towards end flaps of the strip sections of the third series and an axially-outer side turned towards end flaps of the strip sections of the fourth series.

Claim 31 (new): The tyre of claim 30, wherein the strip sections of the first series and the second series extend in a crossed orientation with respect to the strip sections of the third series and the fourth series.

Claim 32 (new): The tyre of claim 31, wherein each of the strip sections further comprises an orientation inclined at an angle greater than or equal to 15° and less than or equal to 35° relative to the circumferential extension of the carcass structure.

Claim 33 (new): The tyre of claim 30, wherein each of the annular reinforcing structures further comprises:

at least one additional portion;

wherein the at least one additional portion is disposed against the end flaps of the strip sections of the fourth series on an opposite side relative to the second primary portion of a respective annular structure.

Claim 34 (new): The tyre of claim 30, wherein each of the strip sections further comprises:

two side portions; and

a crown portion;

wherein the two side portions substantially extend toward a geometric rotation axis of the carcass structure at mutually-spaced-apart positions in an axial direction,

wherein the crown portion extends at a radially-outer position between the side portions,

wherein the crown portions of the strip sections of the first and second series are arranged in mutual side-by-side relationship along the circumferential extension of the carcass structure, and

wherein the crown portions of the strip sections of the third and fourth series are arranged in mutual side-by-side relationship along the circumferential extension of the carcass structure.

Claim 35 (new): The tyre of claim 34, wherein the side portions of each of the strip sections of the first series are each partly covered with a side portion of at least one adjacent strip section of the second series at a stretch included between a radially-outer edge of a respective primary portion of the annular reinforcing structures and a transition region between the side portions and the crown portions, and

wherein the side portions of each of the strip sections of the third series are each partly covered with a side portion of at least one adjacent strip section of the fourth series at a stretch included between a radially-outer edge of a respective primary portion of the annular reinforcing structures and a transition region between the side portions and the crown portions.

Claim 36 (new): The tyre of claim 34, wherein the side portions of the strip sections radially converge toward the geometric rotation axis of the carcass structure.

Claim 37 (new): The tyre of claim 30, wherein the strip sections of one of the series are disposed according to a circumferential distribution pitch corresponding to a multiple of a width of the strip sections.

Claim 38 (new): The tyre of claim 30, wherein each of the strip sections further comprises a width greater than or equal to 3 mm and less than or equal to 15 mm.

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Claim 39 (new): The tyre of claim 30, wherein each of the strip sections further comprises greater than or equal to three thread elements and less than or equal to eight thread elements.

Claim 40 (new): The tyre of claim 30, wherein the thread elements are disposed in respective strip sections according to a mutual distance between centers not lower than 1.5 times a diameter of the thread elements.

Claim 41 (new): The tyre of claim 30, wherein each of the primary portions comprises:
a circumferentially-inextensible annular insert substantially in a form of a crown; and
a filling body of elastomer material having one side joined to the annular insert;
wherein the annular insert is disposed coaxially with the carcass structure, close to an inner-circumferential edge of the carcass plies, and
wherein the annular insert comprises at least one elongated element extending in concentric coils.

Claim 42 (new): The tyre of claim 41, wherein each of the annular reinforcing structures further comprises:

at least one additional portion;

wherein the at least one additional portion is disposed against the end flaps of the strip sections of the fourth series on an opposite side relative to the second primary portion of a respective annular reinforcing structure.

Claim 43 (new): The tyre of claim 42, wherein the at least one additional portion comprises:

an additional circumferentially-inextensible annular insert substantially in a form of a crown;

wherein the additional annular insert comprises at least one elongated element extending in concentric coils, disposed coaxially with the carcass structure at a position axially close to the filling body of the second primary portion of the respective annular reinforcing structure.

Claim 44 (new): The tyre of claim 41, wherein the filling body of each of the primary portions comprises a hardness greater than or equal to 48° Shore D at 23° C and less than or equal to 55° Shore D at 23° C.

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